

HEALTH CONSULTATION

CHESHIRE GROUND WATER CONTAMINATION SITE
CERCLIS NO. CTD981067317

CHESHIRE, CONNECTICUT
October 11, 1996

Prepared by
Connecticut Department of Public Health
under cooperative agreement with the
Agency for Toxic Substances and Disease Registry

The conclusions and recommendations in this health consultation are based on the data and information made available to the Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry. The Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry will incorporate additional information if it becomes available. The incorporation of any additional data could change the conclusions and recommendations listed in this document.

Background and Statement of Issues

The Cheshire Ground Water Contamination site is a National Priorities List site located in Cheshire, Connecticut. In August 1996, the Environmental Protection Agency (EPA) requested that a health consultation be written to address the most recent ground water, surface water, sediment and soil samples collected from the site [1]. These samples were collected to determine the nature and extent of site contamination and the source of the ground water plume. The purpose of this consultation is to evaluate whether any current health threat exists at the site and to identify any outstanding public health issues. EPA is proposing a No Action Record of Decision (pending public comment) in November 1996.

The site covers approximately 15 acres. It is bordered by private and industrial properties to the south, wetlands to the west and private and commercial properties to the north and east. The nearest residential property is located across the street. An industrial building of approximately 70,000 ft² and paved parking areas cover a portion of the site. There are two ponds on the site.

From 1966 to 1979, the site was occupied by Valley National Corporation which did plastic molding and packaging. From 1979 to approximately 1980, Cheshire Molding conducted similar activities on site. During the period of 1966 to 1980, an underground drain pipe leading from a concrete pit was allegedly used for process waste disposal. In 1982, Airpax Corporation leased the property. Airpax Corporation manufactured electro-mechanical and electronic devices until 1995. The site is currently occupied by another tenant.

In June 1990, the Agency for Toxic Substances and Disease Registry (ATSDR) conducted a preliminary public health assessment for the site. [2] In that assessment, ATSDR concluded that the site presented a potential public health concern because of possible exposure to volatile organic compounds in ground water in the past. ATSDR recommended that further evaluation of ground water occur. ATSDR also conducted a health consultation specific to five drinking water wells in the area of the Cheshire Associates site in October 1990. It was concluded that low levels of contamination identified in the private wells did not present a public health threat however, it was recommended that one well that had high levels of lead be re-sampled and evaluated. Currently, all businesses and residential properties within the vicinity of the site receive public water for potable purposes.

Discussion

The specific hazardous waste handling practices of all of the past tenants at the site are not known. However, it is believed that effluent from the manufacturing processes was discharged through an underground drain pipe that subsequently discharged to the larger on-site pond. Settling pits in the northwest corner of the building were also used to treat process waste water. Chemicals have been stored in tanks along the north wall of the building.

In the early 1980's, a prospective purchaser, suspecting site contamination, hired a consultant to conduct a ground water study. Ground water contamination was identified. Under the direction of the Connecticut Department of Environmental Protection, a number of remediation activities took place in the early 1980's. An underground storage tank was cleaned and pressure tested. This tank, although found to be intact, was subsequently removed in 1984. The drain line to the concrete pits and the ponds were sealed. The concrete pits were resealed. In 1983 some contaminated soil was removed from the site.

In October 1994, ground water samples were collected from 5 wells and analyzed for volatile organic compounds (VOCs), semivolatile organics, pesticides, polychlorinated biphenyls, metals and cyanide. These five wells included three on-site monitoring wells, a residential well across the street that has not been used for domestic purposes for more than ten years, and an industrial production well approximately 0.4 miles from the site. Contamination was not identified in any of the wells above health comparison values. During the second phase of this same investigation, 20 soil samples were field screened for VOCs as were seven ground water monitoring wells. The field screening results qualitatively identified the presence of low levels of volatile organic compounds in the overburden ground water and soil.

Additional field screening of ground water was performed in December 1994 and June 1995. Ten volatile organic compounds were field screened for the following compounds: 1,1-dichloroethylene; trans 1,2-dichloroethylene; benzene; trichloroethylene; toluene; tetrachloroethylene; chlorobenzene; ethylbenzene; methylene chloride; and 1,1,1-trichloroethane. During the December sampling activity, field screening was performed at seven wells. At all sampling locations only two of the target compounds were identified. These compounds were 1,1-dichloroethylene and toluene. Three target compounds were tentatively identified in the June sampling. These included 1,1-dichloroethylene, tetrachloroethylene and toluene.

Surface water and sediment sampling was done to evaluate ecological risk in the two on site ponds in June 1995. Laboratory analysis was conducted on some of the surface water and sediment samples. Very few compounds were detected in any of the surface water or sediment samples and none were identified above health comparison values.

Soil samples were collected at the northern end of the site in June 1995 by EPA. Four samples were collected from inside the building and 11 locations were outside. Samples were collected at three different depths ranging from six inches to 42 inches. All samples were screened on site for VOCs. VOCs were not detected in any of the samples.

In December 1995, ground water samples were collected from 12 wells and analyzed for volatile organic compounds, metals and cyanide. Seven of the twelve wells had no detectable levels of VOCs. Five of the twelve wells had very low levels of a few VOCs. None were detected above comparison values. These five wells were all screened in the overburden aquifer.

Conclusions


Based on the review of data provided by EPA there appears to be no apparent health threat indicated by the site. Historically, elevated levels of contamination have been identified on-site, however, the most recent ground water, soil, surface water and sediment sampling did not identify contamination above levels of health concern. In the early-1980's the site was the focus of a number of remediation activities that appeared to be effective in addressing the most significant contamination at the site. While low levels of VOCs are still present in the overburden, they are not present at a level of health concern. In addition, no one in the vicinity of the site is accessing the ground water for potable purposes, further reducing any risk of exposure.

Recommendations

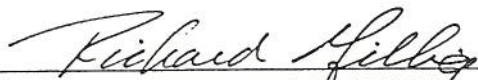
No public health recommendations are being made at this time.

CERTIFICATION

The Health Consultation for the Cheshire Ground Water Contamination site was prepared by the Connecticut Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.


for Technical Project Officer, SPS, SSAB, DHAC

The Division of Health Assessment and Consultation(DHAC), ATSDR, has reviewed this Health Consultation and concurs with its findings.


for Chief, SSAB,DHAC, ATSDR

PREPARER OF HEALTH CONSULTATION

Jennifer Carnes Kertanis, M.P.H.
Epidemiologist
Environmental Epidemiology and Occupational Health
Department of Public Health and Addiction Services

ATSDR Regional Representative:

Louise House
EPA/New England

ATSDR Technical Project Officer:

Tina Forrester, Ph.D.
Superfund Site Assessment Branch
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry

REFERENCES

1. United States Environmental Protection Agency. Memorandum to Louise House and environmental sampling data, ATSDR Region I from Jane Dolan. Request for Health Consultation, Cheshire Ground Water Contamination Superfund Site, Cheshire, CT. August 14, 1996.
2. ATSDR Public Health Assessment: Cheshire Associates Site, June 25, 1990.